



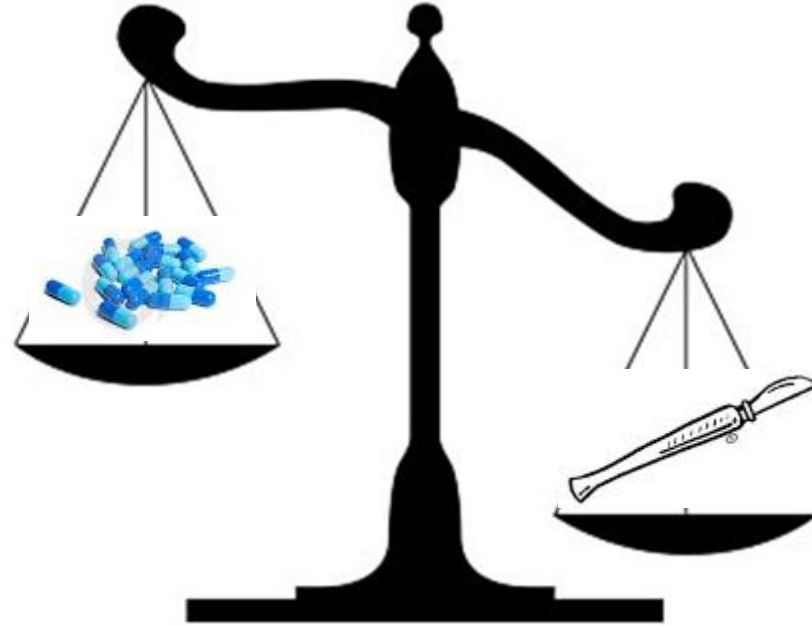
Is Diabetic Foot Osteomyelitis a Medical or Surgical Problem?

Prof Ketan Dhatariya MSc MD MS FRCP PhD

Consultant in Diabetes and Endocrinology
Norfolk and Norwich University Hospitals



Primarily Medical vs Primarily Surgical Management



It Depends on Who is Answering the Question

For Example

Diabetes Care Volume 37, March 2014

789



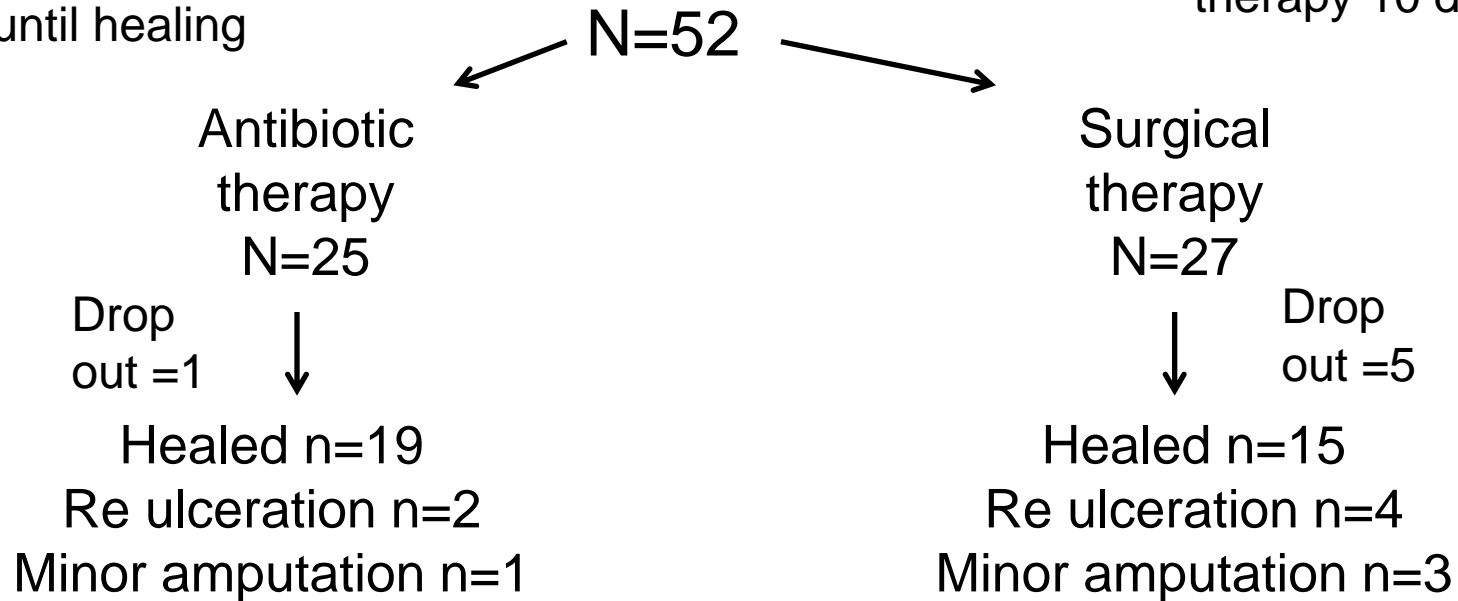
Antibiotics Versus Conservative Surgery for Treating Diabetic Foot Osteomyelitis: A Randomized Comparative Trial

*José Luis Lázaro-Martínez,¹ Javier Aragón-
Sánchez,² and Esther García-Morales¹*

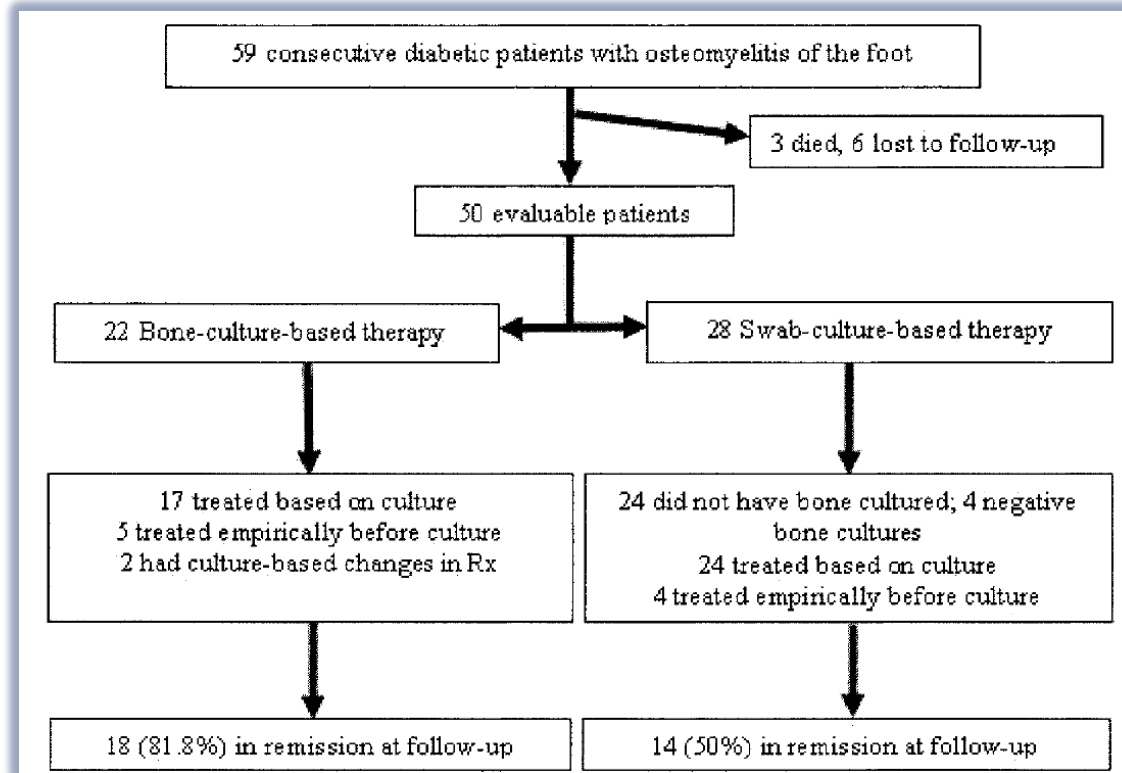
Medical vs Surgical

Antibiotics
therapy 90 days
or until healing

Antibiotic
therapy 10 days



Other (Non-surgical) Data



Our Own Data

Clinical and Translational Research

Predictors of Outcomes in Diabetic Foot Osteomyelitis Treated Initially With Conservative (Nonsurgical) Medical Management: A Retrospective Study

**Paul Zeun, BMBS, MRCP¹, Catherine Gooday, BSc, PG Dip¹,
Ian Nunney, BSc, MSc², and Ketan Dhatariya, MSc, MD, MS, FRCP¹**

The International Journal of Lower
Extremity Wounds

2016, Vol. 15(1) 19–25

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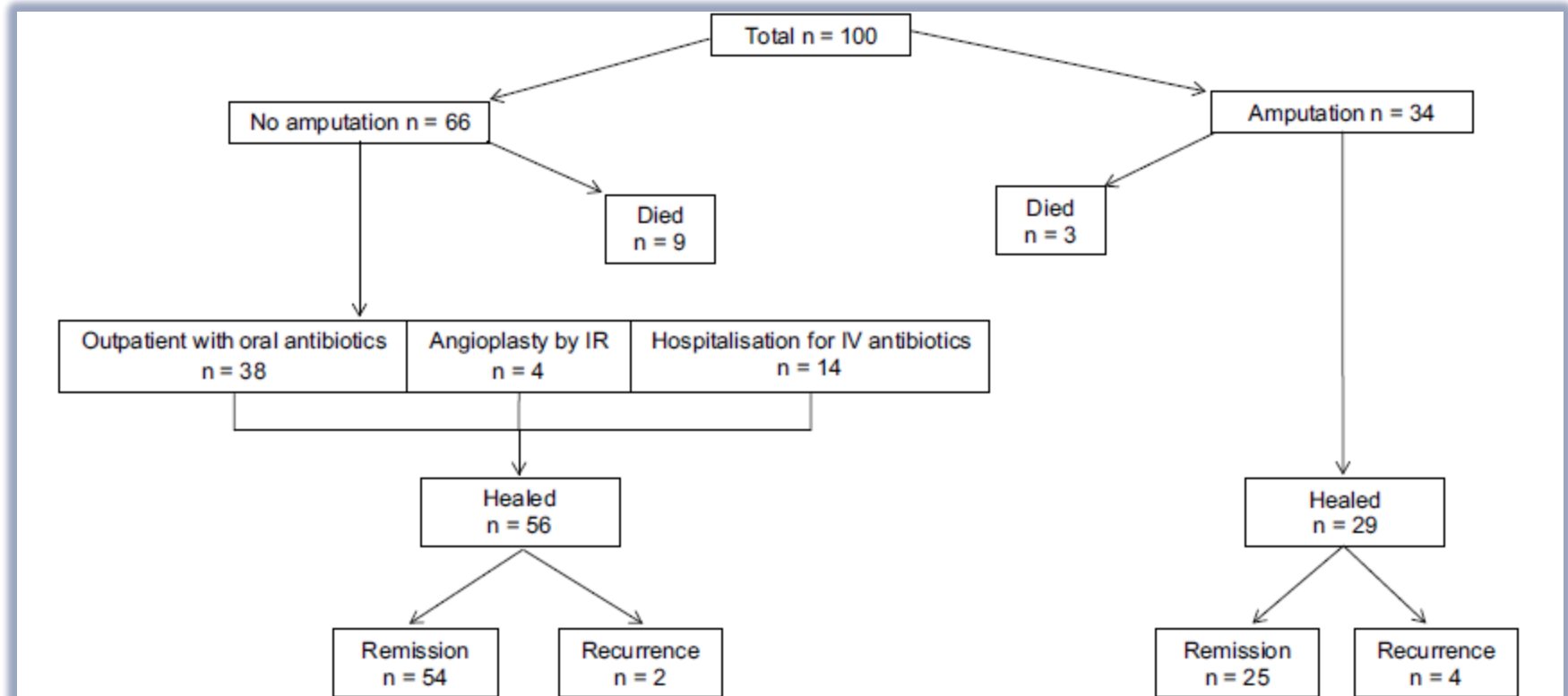
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After a 12-month follow-up period, 54 (63.5%) had achieved remission with nonsurgical management alone with a median (interquartile range) duration of antibiotic treatment of 10.8 (10.1) weeks.

Situations Where Non-surgical Management of Might be Considered

- There is no acceptable surgical target
- The patient wishes to avoid amputation
- Infection is confined to the forefoot
- Surgery would be too high risk

Primarily Antibiotic Management – What are the Risks ?

- GI side effects – nausea, diarrhoea
- Renal impairment – aminoglycosides
- Liver abnormalities – co-amoxiclav, tetracyclines
- Haematological abnormalities – linezolid
- Photosensitivity – tetracyclines
- Prolonged QT syndrome – macrolides
- Peripheral neuropathy – linezolid
- Allergy
- Tendons – fluoroquinolones

Medical Management: Other Potential Harms

- Emergence of resistant organisms or *C. difficile*
- Acute Charcot
- Treatment failure

Surgery: Potential Harms

- General anaesthetic:
 - permanent nerve damage, anaphylaxis 1:10,000
 - death 1:100,000
- Spinal block:
 - permanent harm 1:23,500 - 1:50,500
 - paraplegia or death 1: 54,500 – 1:141,500
- Local block
 - permanent nerve damage 1:2,000- 1:5,000

Surgery: Potential Harms

- Distortion of architecture of foot
 - Transfer ulcers
 - Quality of life
 - Balance
- Acute Charcot
- Treatment failure

Treatment Failure – Residual Osteomyelitis

- In several studies the rates of residual osteomyelitis after amputation of the toes or metatarsals varies between 4% and 62%
- Many require re-operation

Hachmöller A Zentralbl Chir 2007;132(6):491-496
Kowalski TJ et al J Foot Ankle Surg 2011;50(2):171-175
Atway S et al J Foot Ankle Surg 2012;51(6):749-752
Aragon-Sanchez J et al Diabet Med 2012;29(6):813-818

What About Osteomyelitis?

- NICE says – Think about osteomyelitis if the person with diabetes has a local infection, a deep foot wound or a chronic foot wound
- If osteomyelitis is suspected in a person with diabetes but is not confirmed by initial X-ray, consider an MRI to confirm the diagnosis



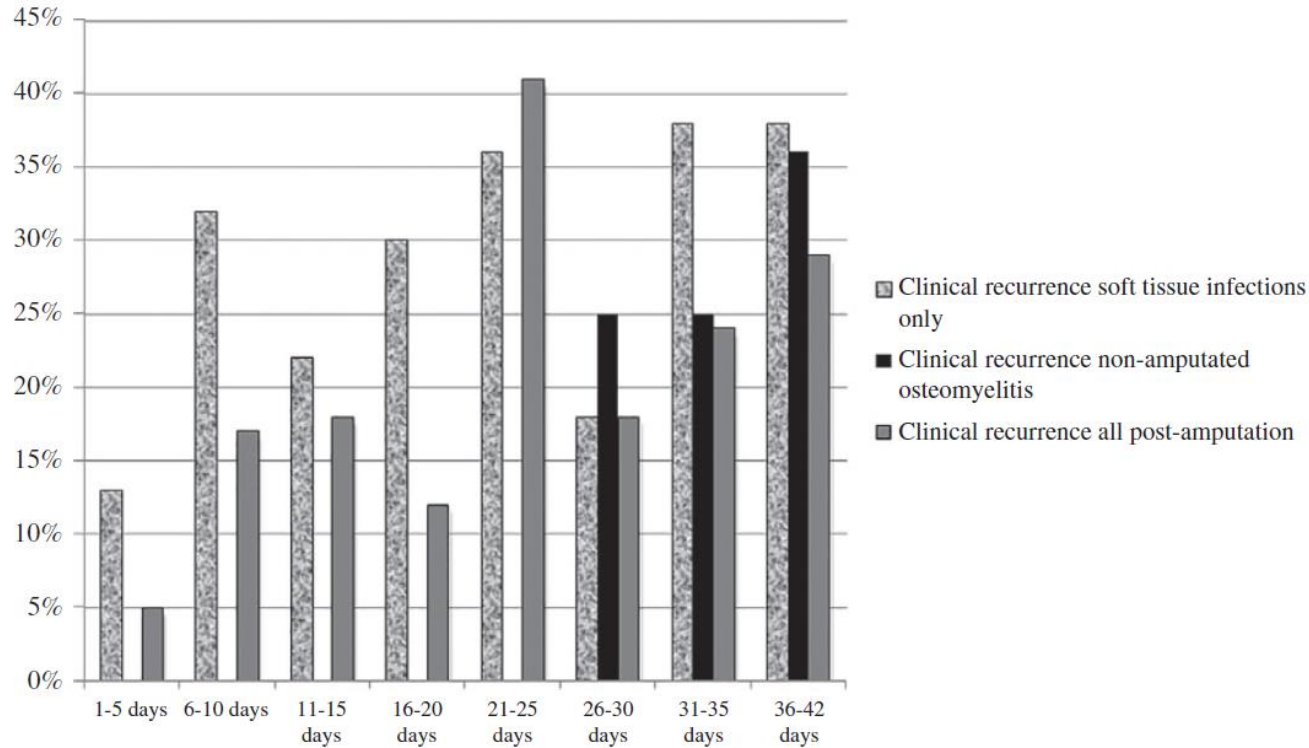
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Six-Week Versus Twelve-Week Antibiotic Therapy for Nonsurgically Treated Diabetic Foot Osteomyelitis: A Multicenter Open-Label Controlled Randomized Study

*Alina Tone,¹ Sophie Nguyen,¹
Fabrice Devemy,² H el ene Topolinski,³
Michel Valette,¹ Marie Cazaubiel,⁴
Armelle Fayard,⁵  Eric Beltrand,⁶
Christine Lemaire,³ and  Eric Senneville¹*

Diabetes Care 2015;38:302–307 | DOI: 10.2337/dc14-1514

Duration of Treatment?



- No idea! No differences in outcome for long or short duration

Published This Month

Systematic Review or Meta-analysis

Systematic review of randomized controlled trials on antibiotic treatment for osteomyelitis in diabetes

K. Xing¹, G.Huang¹, S. Hua³, G. Xu⁴ and M. Li² 

Conclusions There is no definitive evidence supporting the superiority of any particular antibiotic agent, dose, or administration duration in the treatment of osteomyelitis in diabetes. As the included studies had some flaws and limitations, further research is necessary.

Oral vs IV?

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Oral versus Intravenous Antibiotics for Bone and Joint Infection

H.-K. Li, I. Rombach, R. Zambellas, A.S. Walker, M.A. McNally, B.L. Atkins, B.A. Lipsky, H.C. Hughes, D. Bose, M. Kümin, C. Scarborough, P.C. Matthews, A.J. Brent, J. Lomas, R. Gundle, M. Rogers, A. Taylor, B. Angus, I. Byren, A.R. Berendt, S. Warren, F.E. Fitzgerald, D.J.F. Mack, S. Hopkins, J. Folb, H.E. Reynolds, E. Moore, J. Marshall, N. Jenkins, C.E. Moran, A.F. Woodhouse, S. Stafford, R.A. Seaton, C. Vallance, C.J. Hemsley, K. Bisnauthsing, J.A.T. Sandoe, I. Aggarwal, S.C. Ellis, D.J. Bunn, R.K. Sutherland, G. Barlow, C. Cooper, C. Geue, N. McMeekin, A.H. Briggs, P. Sendi, E. Khatamzas, T. Wangrangsimakul, T.H.N. Wong, L.K. Barrett, A. Alvand, C.F. Old, J. Bostock, J. Paul, G. Cooke, G.E. Thwaites, P. Bejon, and M. Scarborough, for the OVIVA Trial Collaborators*

- Not enough people with diabetes in this cohort of 1054 people to be able to see any differences

In Summary

- Osteomyelitis - depending on severity - is initially a medical condition and if that is unsuccessful after a prolonged period of antibiotics, then surgery should be considered



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www.norfolkdiabetes.com

ketan.dhatariya@nnuh.nhs.uk

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